

<b>Taxon:</b> <i>Psoralea axillaris</i> L.f.	<b>Family:</b> Fabaceae
<b>Common Name(s):</b> psoralea	<b>Synonym(s):</b> <i>Psoralea linearis</i> Thunb.

<b>Assessor:</b> Chuck Chimera	<b>Status:</b> Assessor Approved	<b>End Date:</b> 24 May 2017
<b>WRA Score:</b> 1.0	<b>Designation:</b> L	<b>Rating:</b> Low Risk

**Keywords:** Compact Shrub, Unarmed, Dense Stands, N-Fixing, Reseeder

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)	y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	n
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	n
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		
409	Is a shade tolerant plant at some stage of its life cycle		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)		

Qsn #	Question	Answer Option	Answer
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	y
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	y
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat		
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation		
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant		
704	Propagules adapted to wind dispersal	y=1, n=-1	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m <sup>2</sup> )		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides	y=-1, n=1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

**Supporting Data:**

Qsn #	Question	Answer
101	Is the species highly domesticated?	n
	Source(s)	Notes
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From Flora Capensis, Vol 2, page 1, (1894) Author: (By W. H. HARVEY). plants.jstor.org	No evidence

102	Has the species become naturalized where grown?	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	NA

103	Does the species have weedy races?	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	NA

201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	Intermediate
	Source(s)	Notes
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From Flora Capensis, Vol 2, page 1, (1894) Author: (By W. H. HARVEY). plants.jstor.org	"Distribution SOUTH AFRICA Sand hills at Doornhoogde, Cape District, E. & Z, (Herb. Sond.)"

202	Quality of climate match data	High
	Source(s)	Notes
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From Flora Capensis, Vol 2, page 1, (1894) Author: (By W. H. HARVEY). plants.jstor.org	

Qsn #	Question	Answer
203	<b>Broad climate suitability (environmental versatility)</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From Flora Capensis, Vol 2, page 1, (1894) Author: (By W. H. HARVEY). plants.jstor.org	"SOUTH AFRICA Sand hills at Doornhoogdte, Cape District, E. & Z, "
	B & T World Seeds. 2017. <i>Psoralea axillaris</i> . <a href="http://b-and-t-world-seeds.com/cartall.asp?species=Psoralea%20axillaris&amp;sref=463268">http://b-and-t-world-seeds.com/cartall.asp?species=Psoralea%20axillaris&amp;sref=463268</a> . [Accessed 24 May 2017]	"USDA Zone:8 10° to 20°F (-12° to -6.5°C)"

204	<b>Native or naturalized in regions with tropical or subtropical climates</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From Flora Capensis, Vol 2, page 1, (1894) Author: (By W. H. HARVEY). plants.jstor.org	"SOUTH AFRICA Sand hills at Doornhoogdte, Cape District, E. & Z, "

205	<b>Does the species have a history of repeated introductions outside its natural range?</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2017. Personal Communication	No evidence of widespread introduction outside native range

301	<b>Naturalized beyond native range</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence
	Wagner, W.L., Herbst, D.R.& Lorence, D.H. 2017. Flora of the Hawaiian Islands. Smithsonian Institution, Washington, D.C. <a href="http://botany.si.edu/">http://botany.si.edu/</a> . [Accessed 24 May 2017]	No evidence to date

302	<b>Garden/amenity/disturbance weed</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

303	<b>Agricultural/forestry/horticultural weed</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

Qsn #	Question	Answer
304	Environmental weed	n
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	y
	Source(s)	Notes
	Global Invasive Species Database (GISD). 2015. Species profile <i>Psoralea pinnata</i> . <a href="http://www.iucngisd.org/gisd/species.php?sc=1671">http://www.iucngisd.org/gisd/species.php?sc=1671</a> . [Accessed 24 May 2017]	"It is reported to be highly invasive in heathland in Australia (Muyt 2001). In the far north of New Zealand <i>P. pinnata</i> is found on volcanic soils and is most common close to roads and tracks (Enright 1989)."..."In Western Australia <i>P. pinnata</i> is one of several weeds that invades the habitat of the endangered mountain villarsia ( <i>Villarsia calthifolia</i> ) and is listed as a threatening competitor to this rare species (Gilfillan & Barrett 2004). <i>P. pinnata</i> is also one of several weeds (gorse ( <i>Ulex europaeus</i> ; <i>Acacia longifolia</i> var <i>sophorae</i> ; bitou bush ( <i>Chrysanthemoides monilifera</i> ) that threatens the heath and swamp habitat of the emu wrens in south-west Victoria (Maguire & Mulder, 2004). Additionally these weeds need to be managed and cause the use of chemicals and other mechanical tools in this habitat."
	Stirton, C. H., Stajsic, V., & Bello, A. (2015). Naturalised species of <i>Psoralea</i> (Fabaceae: Psoraleeae) in Australia. <i>Muelleria</i> , 33, 97-107	" <i>Psoralea arborea</i> ...It occurs along roadsides and escapes into bushland, and at sites such as Burnie it can form very dense and large populations where it can be dominant such as at Eaglehawk Neck, neglected and disturbed weedy areas, and quarries. Groves et al. (2005) record it as one of the ten most serious invasive garden plants available for sale in Tasmania (referred to as <i>P. pinnata</i> in their report)."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	<i>Psoralea americana</i> , <i>Psoralea aphylla</i> , <i>Psoralea arborea</i> , <i>Psoralea bituminosa</i> , <i>Psoralea cinerea</i> , <i>Psoralea corylifolia</i> , <i>Psoralea glandulosa</i> , <i>Psoralea graveolens</i> , <i>Psoralea lanceolata</i> , <i>Psoralea patens</i> , <i>Psoralea plicata</i> , <i>Psoralea rhombifolia</i> & <i>Psoralea tenuiflora</i> listed as naturalized and/or weeds

401	Produces spines, thorns or burrs	n
	Source(s)	Notes
	JSTOR Global Plants. 2017. Entry for <i>Psoralea axillaris</i> L.f. [family LEGUMINOSAE-PAPILIONOIDEAE]. Entry From <i>Flora Capensis</i> , Vol 2, page 1, (1894) Author: (By W. H. HARVEY). <a href="http://plants.jstor.org">plants.jstor.org</a>	"suffruticose, diffuse or suberect, glabrous, and somewhat glaucous; branches virgate, compressed-trigonous, subsimple; leaves distant, on longish petioles, trifoliolate; leaflets linear lanceolate, flat, midribbed beneath, acute at each end; stipules minute, subulate; pedicels axillary, 1–3 together, about equalling the leaves, bibracteolate above the middle; calyx-lobes unequal, lanceolate. More robust than <i>P. tenuissima</i> , with much broader leaflets and longer petioles; allied also to <i>P. verrucosa</i> , but not woody, and much smaller and weaker and more straggling in growth. Leaves 2–4 inches apart; petiole 6–12 lines long; leaflets 3/4–1 1/2 inch long, 1 line wide."

402	Allelopathic	

Qsn #	Question	Answer
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2017. Personal Communication	Unknown. No evidence found

403	Parasitic	n
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Generic description] "Shrubs or small trees. Leaves 3-foliolate or pinnate, sometimes reduced, dotted with black or red glands, stipules clasping the stem and joined to the base of the petiole." [Fabaceae. No evidence]

404	Unpalatable to grazing animals	
	<b>Source(s)</b>	<b>Notes</b>
	Kerridge, P. C., and Skerman, P. J. (1968). The distribution and growth characteristics of the native legume <i>Psoralea eriantha</i> in western Queensland. <i>Tropical Grasslands</i> 2, 41–50	[Unknown. Other species in genus are palatable] "Skerman (1957) suggested that the prominence of <i>P. eriantha</i> during recent years was most likely due to the reduction of the rabbit population by myxomatosis for it has been observed that the plant foliage and its roots are particularly palatable to rabbits. There is ample evidence that the species is palatable to cattle but due to the nature of the environment it is difficult to assess seasonal changes in palatability or its relative palatability with other species."

405	Toxic to animals	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2017. Personal Communication	Unknown

407	Causes allergies or is otherwise toxic to humans	n
	<b>Source(s)</b>	<b>Notes</b>
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

Qsn #	Question	Answer
408	Creates a fire hazard in natural ecosystems	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown

411	Climbing or smothering growth habit	n
	Source(s)	Notes
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Generic description] "Shrubs or small trees. Leaves 3-foliolate or pinnate, sometimes reduced, dotted with black or red glands, stipules clasping the stem and joined to the base of the petiole."

412	Forms dense thickets	y
	Source(s)	Notes
	iSpot. 2017. Observations in the Species: <i>Psoralea axillaris</i> . <a href="https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris">https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris</a> . [Accessed 24 May 2017]	" <i>Psoralea axillaris</i> ... Tree-like, erect, compact shrub to 3 m, reseeder, forms dense stands."

501	Aquatic	n
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Terrestrial

502	Grass	n
	Source(s)	Notes
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. <a href="http://www.ars-grin.gov/npgs/index.html">http://www.ars-grin.gov/npgs/index.html</a> . [Accessed 24 May 2017]	Family: Fabaceae Subfamily: Papilionoideae Tribe: Psoraleeae

503	Nitrogen fixing woody plant	y
	Source(s)	Notes

Qsn #	Question	Answer
	USDA, ARS, Germplasm Resources Information Network. 2017. National Plant Germplasm System [Online Database]. <a href="http://www.ars-grin.gov/npgs/index.html">http://www.ars-grin.gov/npgs/index.html</a> . [Accessed 24 May 2017]	Family: Fabaceae Subfamily: Papilionoideae Tribe: Psoraleae

504	<b>Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Generic description] "Shrubs or small trees. Leaves 3-foliolate or pinnate, sometimes reduced, dotted with black or red glands, stipules clasping the stem and joined to the base of the petiole."

601	<b>Evidence of substantial reproductive failure in native habitat</b>	
	<b>Source(s)</b>	<b>Notes</b>
	WRA Specialist. 2017. Personal Communication	Unknown

602	<b>Produces viable seed</b>	y
	<b>Source(s)</b>	<b>Notes</b>
	iSpot. 2017. Observations in the Species: <i>Psoralea axillaris</i> . <a href="https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris">https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris</a> . [Accessed 24 May 2017]	"Tree-like, erect, compact shrub to 3 m, reseeder, forms dense stands."
	bidorbuy.co.za. 2017. <i>Psoralea axillaris</i> Seeds. <a href="http://www.bidorbuy.co.za/">http://www.bidorbuy.co.za/</a> . [Accessed ]	Seeds sold online

603	<b>Hybridizes naturally</b>	
	<b>Source(s)</b>	<b>Notes</b>
	Bello, A. (2015). Taxonomy and evolutionary studies on the genus <i>Psoralea</i> L.(Psoraleae, Fabaceae). PhD Dissertation, University of Cape Town	[Unknown. Hybridization documented in genus] "Hybridization may account for some of the patterns in <i>Psoralea</i> as some of the taxa have been observed by me forming hybrids in the field e.g. <i>P. pinnata</i> × <i>P. aculeata</i> , <i>P. sordida</i> × <i>P. forbesii</i> , and <i>P. intonsa</i> × <i>P. oreopola</i> ."

604	<b>Self-compatible or apomictic</b>	
	<b>Source(s)</b>	<b>Notes</b>
	East, E. M. 1940. The distribution of self-sterility in the flowering plants. Proceedings of the American Philosophical Society 82: 449-518	[ <i>Psoralea</i> included among self-fertile genera] "The record of genera in which self-fertile species were found is as follows. The order corresponds with Engler and Prantl, the numbers being those of the species investigated when more than one." ... "Papilionatae. Ateleia, Camoensia, Sophora, Cladrastis, Crotalaria- 2, Laburnum-2, Indigofera, <i>Psoralea</i> , Gliricidia, Robinia- 2, Caragana-4, Desmodium, Lespedeza, Lonchocarpus- 2, Abrus, Clitoria, Erythrina-7, Canavalia-3, Rhynchosia, Dolichos."

605	<b>Requires specialist pollinators</b>	n
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Qsn #	Question	Answer
	Source(s)	Notes
	Stirton, C. H., Stajsic, V., & Bello, A. (2015). Naturalised species of <i>Psoralea</i> (Fabaceae: Psoraleeae) in Australia. <i>Muelleria</i> , 33, 97-107	[Other species in genus are insect-pollinated] "Flowers are visited predominantly by large Xylocopid (see Stirton 2007a, 2007b, 2007c, 2007d) and Megachilid bees, which divide large plant colonies into scattered communal feeding trees interrupted by localised adjacent territories of two to five trees, which the bees defend vigorously. Butterflies have been recorded feeding opportunistically on flowers of this species ( <i>Vanessa cardui</i> (Linnaeus, 1758) [Painted Lady (see Voget 2011)),"

606	Reproduction by vegetative fragmentation	
	Source(s)	Notes
	Global Invasive Species Database (GISD). 2015. Species profile <i>Psoralea pinnata</i> . <a href="http://www.iucngisd.org/gisd/species.php?sc=1671">http://www.iucngisd.org/gisd/species.php?sc=1671</a> . [Accessed 24 May 2017]	[Unknown. No evidence from related, invasive species] " <i>Psoralea pinnata</i> reproduces by seed and can produce thousands of propagules (seeds) annually (Muyt 2001)." ... " <i>P. pinnata</i> is capable of vegetative regeneration and resprouts from its base (FloraBase 2010)." [Does not spread vegetatively, but able to regenerate. See 8.04]

607	Minimum generative time (years)	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	Notes
	Stirton, C. H., Stajsic, V., & Bello, A. (2015). Naturalised species of <i>Psoralea</i> (Fabaceae: Psoraleeae) in Australia. <i>Muelleria</i> , 33, 97-107	[Unknown. Related species accidentally dispersed] "In Australia, <i>P. pinnata</i> reproduces mainly by seed (shed copiously locally then secondarily dispersed by water) in contaminated soil and in dumped garden waste." ... "In Australia, <i>P. pinnata</i> occupies various vegetation formations along streams, in swamps, heathland, dry coastal vegetation, dry sclerophyll forest and woodland, grassy woodlands, rocky outcrops, disturbed tracks and roadsides, rubbish tips, waste places and quarries."

702	Propagules dispersed intentionally by people	y
	Source(s)	Notes
	bidorbuy.co.za. 2017. <i>Psoralea axillaris</i> Seeds. <a href="http://www.bidorbuy.co.za/">http://www.bidorbuy.co.za/</a> . [Accessed 24 May 2017]	Seeds sold online

703	Propagules likely to disperse as a produce contaminant	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown. Limited information on cultivation available

Qsn #	Question	Answer
704	<b>Propagules adapted to wind dispersal</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Generic description] "Pods 1-seeded and glandular and included within the calyx at maturity."
705	<b>Propagules water dispersed</b>	
	<b>Source(s)</b>	<b>Notes</b>
	Stirton, C. H., Stajsic, V., & Bello, A. (2015). Naturalised species of <i>Psoralea</i> (Fabaceae: Psoraleeae) in Australia. <i>Muelleria</i> , 33, 97-107	[Unknown. Related taxon water dispersed] "In Australia, <i>P. pinnata</i> reproduces mainly by seed (shed copiously locally then secondarily dispersed by water) in contaminated soil and in dumped garden waste."
706	<b>Propagules bird dispersed</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Generic description. No evidence] "Pods 1-seeded and glandular and included within the calyx at maturity."
707	<b>Propagules dispersed by other animals (externally)</b>	n
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[No evidence. No means of external attachment] "Pods 1-seeded and glandular and included within the calyx at maturity."
708	<b>Propagules survive passage through the gut</b>	
	<b>Source(s)</b>	<b>Notes</b>
	Manning, J. 2007. Field Guide to Fynbos. Struik Publishers, Cape Town, South Africa	[Unknown if plants are consumed, or if seeds would survive gut passage] "Pods 1-seeded and glandular and included within the calyx at maturity."
801	<b>Prolific seed production (&gt;1000/m<sup>2</sup>)</b>	
	<b>Source(s)</b>	<b>Notes</b>
	iSpot. 2017. Observations in the Species: <i>Psoralea axillaris</i> . <a href="https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris">https://www.ispotnature.org/species-dictionaries/sanbi/Psoralea%20axillaris</a> . [Accessed 24 May 2017]	[Densities unknown] "Description: Tree-like, erect, compact shrub to 3 m, reseeder, forms dense stands."
802	<b>Evidence that a persistent propagule bank is formed (&gt;1 yr)</b>	
	<b>Source(s)</b>	<b>Notes</b>
	Global Invasive Species Database (GISD). 2015. Species profile <i>Psoralea pinnata</i> . <a href="http://www.iucngisd.org/gisd/species.php?sc=1671">http://www.iucngisd.org/gisd/species.php?sc=1671</a> . [Accessed 24 May 2017]	[Unknown. Related taxon with long-lived seeds] "Seeds remain persistent in soil for at least 8 years (Muyt 2001)."

Qsn #	Question	Answer
803	Well controlled by herbicides	y
	Source(s)	Notes
	Global Invasive Species Database (GISD). 2015. Species profile <i>Psoralea pinnata</i> . <a href="http://www.iucngisd.org/gisd/species.php?sc=1671">http://www.iucngisd.org/gisd/species.php?sc=1671</a> . [Accessed 24 May 2017]	[Methods used to control related taxon, <i>P. pinnata</i> , would presumably be effective on <i>P. axillaris</i> ] "Management notes in FloraBase (2010) suggest hand-pulling or digging out young plants and seedlings. For mature shrubs they suggest cutting and painting with 50% glyphosate. Since <i>P. pinnata</i> is capable of resprouting, a 1% glyphosate spray of resprouting material is suggested. <i>P. pinnata</i> seeds are known to persist in the soil for upto 8 years, therefore treated sites need to be managed for at least 8 years."

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	Notes
	Global Invasive Species Database (GISD). 2015. Species profile <i>Psoralea pinnata</i> . <a href="http://www.iucngisd.org/gisd/species.php?sc=1671">http://www.iucngisd.org/gisd/species.php?sc=1671</a> . [Accessed 24 May 2017]	[Unknown. Related taxon able to resprout] "It is tolerant to frost (to temperatures of -4°C), fire (fire stimulates germination and mature plants can reprot),"

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	Notes
	WRA Specialist. 2017. Personal Communication	Unknown

**Summary of Risk Traits:**

## High Risk / Undesirable Traits

- Related species have become invasive
- Reported to form dense stands
- N-Fixing (alters soil chemistry)
- Reproduces by seeds
- Seeds dispersed by gravity & intentionally by people
- Limited ecological information reduces accuracy of risk prediction

## Low Risk Traits

- No reports of invasiveness or naturalization, but no evidence of widespread introduction outside native range
- Unarmed (no spines, thorns, or burrs)
- Non-toxic
- No obvious adaptations for long-distance dispersal